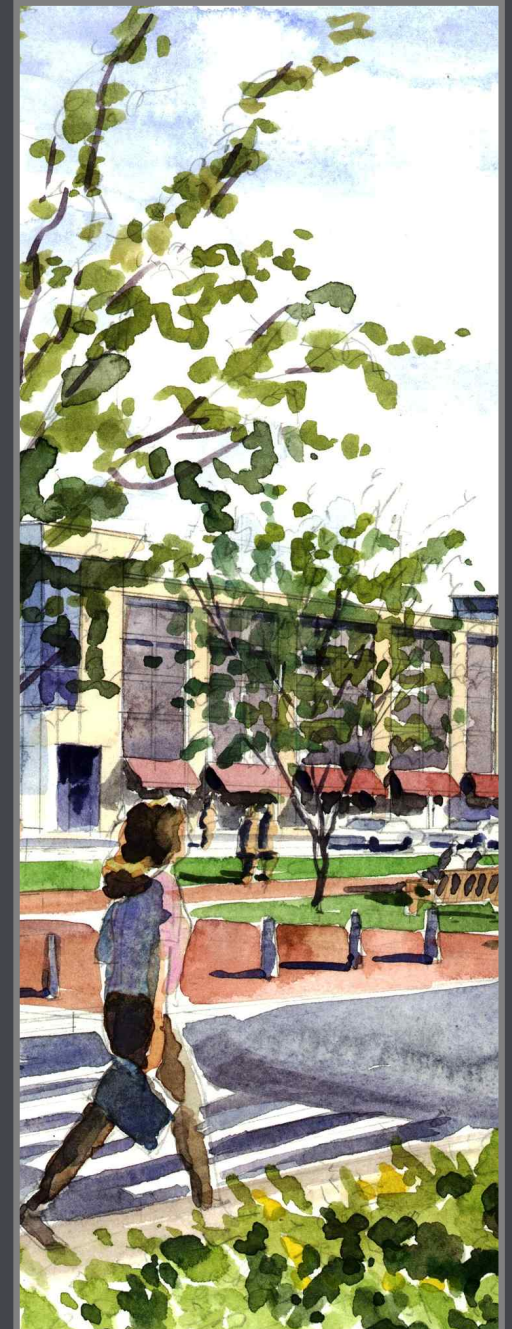


# Transit Oriented Development Right Sizing TODs & Travel

GB Arrington

[arrington@pbworld.com](mailto:arrington@pbworld.com)

pb  
place  
making



# TOD Parking Puzzle



# The TOD Parking Puzzle

- TODs behave differently, yet
  - No definitive industry TOD parking ratios exist
  - Lenders tend to require conventional ratios in TODs
  - Developers tend to build TODs w/ conventional ratios

Changing parking  
key to TOD benefits  
being fully realized

pb **placemaking**



Downtown Salt Lake



W. Oakland BART



Hazelwood, Portland

# TODs create less traffic

- TOD residents are:
  - Twice as likely not to own a car as US Households
  - 5 times more likely to commute by transit than others in region
- Self-selection:
  - Responsible for up to 40% of TOD ridership bonus



# TOD Parking Research





# TCRP Report 128

- Detailed look at 17 built TODs
- All multi-family residential
- Four US Metro areas
  - Washington, DC
  - Philadelphia / NJ
  - San Francisco
  - Portland
- Measured actual performance
  - Trips compared to ITE



# Disconnect with ITE guidance



- Suburban bias w/ existing parking standards
  - Assumes everyone drives
  - Based on limited observations – from Florida
- Overstates TOD trip generation
  - A result is higher development fees
  - 24 hr based rates 50% high
- Parking likely overstated by same amount

# TOD housing generates 50% less traffic than conventional housing

ITE Trip Manual  
6.67 trips per unit

Detailed counts  
of 17 residential TODs  
3.55 trips per unit





# Testing the implications



# Testing the implications

- 8 acre theoretical site
- Four TOD-housing building products
  - Garden Apts
  - Townhomes
  - “Texas Donut”
  - 6-story Mid-rise
- Test two parking ratios
  - 2.2 spaces per unit
  - 1.1 spaces per unit
  - Both transit friendly



# *TOD Prototypes*

## **Garden Apartment**



- Density: 24 to 32 units per acre
- Height 2 to 3 stories
- Surface parking

Photo's courtesy of PB PlaceMaking



pb **placemaking**

Gresham Central Apartments, Gresham Oregon

# *TOD Prototypes* **Townhome**



- Density: 36 to 48 units per acre
- Height: 2 to 3 stories
- Surface parking

Photo's courtesy of PB PlaceMaking





# *TOD Prototypes*

## **Texas Donut**



- Density: 90 to 120 units per acre
- Height: 4 to 5 stories
- Residential wrapped around structured parking

Photo's courtesy of DART





# *TOD Prototypes*

## **6 Story mid-rise**



- Density: 100 to 120 units per acre
- Height: 6 stories
- Freestanding parking structure

Photo's courtesy of PB PlaceMaking



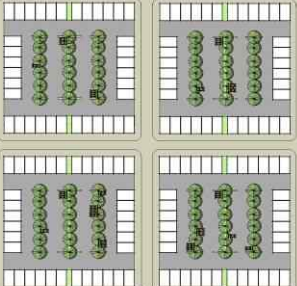







pb **placemaking**

Mission Bay, San Francisco, California

# Garden Apts

# Townhomes

2.2 Spaces per unit	1.1 Spaces per unit	2.2 Spaces per unit	1.1 Spaces per unit
			
			

## Lower ratio

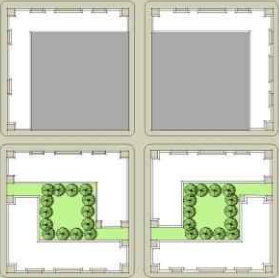

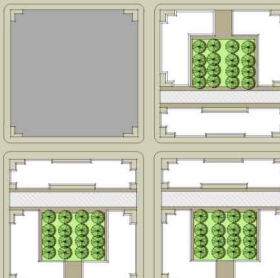
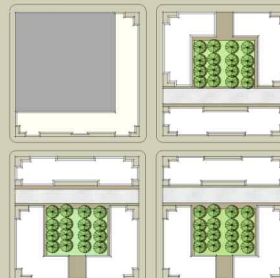




- + 33% in Density
- + 60 units
- \$98,000 parking saving  
pb **placemaking**

## Lower ratio

- + 33% in Density
- + 96 units
- \$736,000 parking saving

# “Texas Donut”

# Mid-Rise Apts

2.2 Spaces per unit	1.1 Spaces per unit	2.2 Spaces per unit	1.1 Spaces per unit
			
			

## Lower ratio

- + 20% in Density
- + 162 units
- \$5.3m parking saving  
pb **placemaking**

## Lower ratio

- + 20% in Density
- + 225 units
- \$12m parking saving

# Implications





# Case Study Implications

Going from 2.2 to 1.1:

- 20 to 33% higher residential density
- More units + lower parking costs (5 to 36% lower costs)
- Higher transit ridership
- More opportunity
  - Higher developer profits
  - Greater housing affordability
  - More projects financially feasible





# Right Sizing TOD Parking

- New standards to reflect TOD should result in:
  - Developers paying lower fees and exactions
  - Diminished need to expand roads
  - Transit agencies realizing increased ridership
  - The public paying less for TOD housing
  - 20 to 33% increase in TOD density



**The city is changing.**

**And**

**we must change**

**how we plan for**

**the future of**

**cities.**

**pb**  
**place**  
**making**